DOCUMENT RESUME

ED 172 939 PS 010 694

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TITLE Why Play?
PUB DATE 79
NOTE 16p.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Child Development; Cognitive Development; Discovery Learning; *Experiential Learning; Infant Behavior; *Learning Experience; *Play
IDENTIFIERS *Psychiatric Perspectives

ABSTRACT

This paper draws together briefly theories and knowledge from research in morphology and cognitive psychology, as well as some hypothetical information from traditional psychiatry, to show the ramifications of play in children's development. Play is defined as any of a wide variety of behaviors through which an individual attempts to discover what sort of person he is, what he is able to do, and in this way learn about his environment. Play is said to: (1) help the infant to understand the potentialities of its own body, of its body in space, of the way in which stimuli will impinge upon it, and how it must organize itself in relationship to these incoming stimuli; (2) offer the opportunity for the child to "chunk" incoming information; (3) provide environmental learning and the opportunity for mastery; (4) help the infant acquire information about his potential creativity, his imagination, and his social skills through imitation and role-playing; (5) help the equilibration process, and ensures the use of developing schemata; (6) help the child distinguish the "not me," and allows him to begin to recognize what is outside of his omnipotent and narcissistic control; (7) help the "observing ego" and act as a kind of self-healing mechanism. (Author/SS)

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WHY PLAY?

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Two tiny figures, intensely involved with piles of sand and small now-wheel-less cars, heads together in the spring sunlight, giggling and talking. The scene is a familiar one not only in the present, but in our memories of childhood as well. Watching and remembering we all know why children play - it's fun! But there is much more to play than meets the casual eye. Over the past two decades, psychologists interested in cognitive development have become increasingly aware of the importance of play as a child's major method of learning. Sigel and McBane, writing in 1967 on their research with young children, say: "Play allows the child to practice what he has met up with in his world, and gradually, through play, comes to know".

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Even developmental psychologists initially looked at play largely as providing the basis for later academic learning of concepts (Spicker, 1969); they saw child's play as filling the need to explore and experiment in sensory ways, which is part of the concrete stage of thought which precedes the level of abstract reasoning developmentally (Piaget, 1962).

Gradually, however, as more observation of children at play and in-depth research were done, it became clear that play was essential to the child's total development: emotional, physical, psychological and cognitive (Weininger, 1979).

Play, as it continues, allows the child to practice what he has met up with in his world, and gradually, through play, comes to know. Piaget considers play as essential to the development of the intellect. It is a process whereby the child experiences his world as being first a series of unintegrated stimuli or events, moving into more integrated cognitive schemata.

Research findings indicate that children of lower class appear to be less able to function on representational levels than middle class peers. Segal & McBain (1967) suggest that these children's cognitive structures were not sufficiently developed so that new experiences might be assimilated. In other words, it appears that the lower class child has not had sufficient opportunity for play. Borowitz (1970) in a study of pre-school ghetto boys shows that organization and quantity of imaginative play, quality of verbal articulation, are poor, and related to the cognitive competence. The way in which a child organizes his play is an indication of his ability to deal effectively with the world.

Malbadien (1971) indicates that when the curriculum is built around equipment, where play and discovery are important, where the teacher is seen as

enhancing the skills, and where the child's curiosity is used as a learning device, that programs of this nature are more successful than, for example, highly directive curriculum formats. Play seems to be a successful tool in implementing such a program.

Play seems to improve the pre-school programs, as well as school curricula models (Weikart, 1971; Karnes, 1972).

Play, when effectively used, appears to be an effective curricular tool (Spicker, 1969).

As far as the use of toys and play equipment is concerned, Busse (1970) notes that it is not the equipment itself that is important, it seems to be the child's use of equipment. Children, however, can create something from almost nothing. Some need help in bridging the world between formal learning and play. Verbal interaction between child and teacher during play seems to help the child acquire the steps to accept the formal structure necessary to learn some concepts as, for example, the abstract nature of arithmetical functions (Levenstein, 1968).

In this paper, I will try to draw together briefly theories and knowledge from research in morphology and cognitive psychology, as well as some hypothetical information from traditional psychiatry, to show what we now feel are the ramifications of play in a child's development. We now feel that play is no less than a survival skill for the human species; to play is not only to learn, but to learn to survive.

We can define play as any of a wide variety of behaviours through which an individual attempts to discover what sort of person he is, what he is able to do, and in this way to learn about his environment (Weininger, 1979). It is the earliest opportunity provided by the species for the child to acquire some of the enormous amount of information necessary for his or her effective survival as an adult in our culture.

Anthropological observation indicates that the more prolonged the growing up process is, the longer a young mammal is allowed to play, the greater is the amount of information and the number of skills which must be acquired prior to separation from the mother. We can see similar-to-human behaviour most easily in other large mammals. For example, in observing the kindsof play chimps involve themselves in, it appears quite obvious that they too are attempting to find out how they influence their environment. Jane Goodall's work certainly shows that play is an important part of the chimp's activity, particularly in relationship to the mother, and that it is a very serious activity which has as its intent an understanding of the world about it. For example, the chimp's mother by dangling her baby by one foot, is not only performing a kind of close attachment behaviour, but is also providing her baby with the opportunity of feeling how it would be to dangle from the limb of a tree.

Play is at the service of helping the infant to understand the potentialities of its own body, of its body in space, of the way in which stimuli will impinge upon it, and how it must organize itself and/or adjust

itself in relationship to these incoming stimuli. The serious preoccupation that most babies, whether they be human or chimp or lion or dog bring to scratching at a small hole in the ground, or making variations of a sound, or watching a speck of light dust, or gazing at a fly, is to try to bring in information in an effort to acquaint oneself with one's world, and in so doing to insure one's survival. Play, then, is at the service of survival; and the higher up on the evolutionary scale, the more information we have to learn in order to survive; therefore it is not at all surprising to find the human baby and child being involved in a great deal of playful activity.

Cognitively, play offers the opportunity for the child to "chunk" incoming information so that he or she can use it in moderate ways. At first, only a bit of the information will be processed, and later on this "chunking" of information will be increased to the point where, as an older child, he or she will be able to grasp large sections of information and in this way almost automatically be able to become involved in various kinds of learning processes. When the learning is novel, then the child will have to return to the "chunking" and take in bits at a time. It is very similar to the way in which novel stimuli will affect any behaviour. For example, if the stimulus is too novel - that is, when chimps are presented with deformed bodies of chimps where the model lacks a head or an arm - the stimulus is too disturbing to approach, and only when the chimp has been able to do some preliminary exploration does he approach the stimulus (Goodall, 1972). So, too, with the human. If the stimulus is too novel, then the human seems to not look or perhaps is unable to view it effectively. It is almost as though the stimulus

does not "process" cognitively and emotionally. There is no prior "chunking" to admit this kind of unusually novel stimulus. If the stimulus is stale or completely known, then the human may ignore it as well, unless the human needs to go back to information it has known because of fear or anxiety and in this way regroup its internal processes. It means as well that for humans and perhaps for other mammals it is very important that the novelty of the stimulus be not so great as to prevent the organism from looking at and in that way acquiring information. It is not unusual, for example, for humans to either not "see" or to quickly forget horrible scenes. It is, perhaps fortunately, as if their "chunking" has not been organized in that direction.

This method of information acquisition, a very prominent characteristic of the human infant and child, appears to be a function of the attachment process. The more effective the attachment to the mother, then the more effective is the information acquisition processing (Klaus & Kennell, 1978). It also appears from Jane Goodall's work that those mother chimps who have a higher status in the pack provide for increased amounts of time for play for their babies, and, as well, a greater variety of play. Perhaps the human mother does just the same, although there is no research to prove this point, to my knowledge.

Play is a very major heading involving exploration, curiosity, sensory-motor activity, social activity, verbal imitation, and divergent thinking. There are many activities we all would categorize as play - when a child is moving blocks and piling them up alone, or when a parent crawls on his or her hands and knees, pretending to be a pussycat moving after the

child, and the child giggles and laughs, or when the child is fascinated with a bit of string or a tree branch, or when the baby is exploring fingers and toes, sounds and tastes, or when the child is colouring and painting, or when the child is alone, thinking and gazing, or when the child is digging in the sand making a hole and a wall, or when the adolescent is bouncing a ball or tries to score a basket, and when the adult is walking through the woods or playing golf or swimming - these are all activities which are subsumed under "play". In every case the actions are intrinsically motivated and there may be considerable pleasure, emotionally and/or physically, in performing the acts regardless of the goal or outcome of the activity.

Play helps the individual to discover "what can I do to an object to make it change its function, what can I do in relation to my world that helps me learn about it?" Whether it is learning about water, or air, or sand, or fire, play provides for this sort of environmental learning. It involves a social, cultural role-playing, it involves safety knowledge and is of survival value, and it creates a set to generate ideas for alternative means of performing acts, whether they be real or fantasy. To explore an object is almost to say "What can the object do?" and the child may begin by exploring the object in a sensory-motor style. In exploration it would seem that the stimulus of the object is the important point. However, this importance can only be as great as the capacity of the child or adult to think of "what can I do to explore the function of the object?". Play permits the child to stay with an object, to explore it, to find out how it

functions, first in relation to patterns that he already knows, and then alternate patterns. Play, then. subsumes exploration and teaches the child the consequences of his acts. Play provides for the opportunity of mastery, both in terms of the object world and the social world. While play may be tense, frustrating, exciting, happy, sad, or even boring, it provides the opportunity for the person to explore how he functions as well as how the object he is using functions. Play is the acquisition of information related to the potentials around and within the self. A child may be playing with a ball, for instance, discovering that it bounces when dropped or thrown; that it bounces higher on a hard surface like a sidewalk than on soft earth; that if thrown up it always comes back down; that if he throws it just right against the side of a building he can make it return directly to him, or he can make it bounce back in another direction. The child learns the skills involved in doing all these things with the ball, and that he can do different things with balls of different sizes - his hands learn the skills of catching and throwing a ball, a process which gives the child a feeling of accomplishment and knowledge about how balls "work".

Jean Piaget (1962) has pointed to play as the important activity in intellectual development. At first the infant plays in manipulative ways, using hands and visual gaze, and gradually the behaviour patterns become more appropriate to the object so the infant is able to use the object perhaps in ways for which it was designed. As the infant matures, through play he acquires information about his potential creativity, his imagination, and his social skills, and he does this through imitation and role-playing, perhaps

using at first small replicas of the adult world and later being able to behave in the "as if it were here" way and participate in social drama. The child can play pretend that he is going on a visit to a mountain top, or that he is in the midst of a hurricane, and presents the play, then, using the information that he has acquired in other activities. In this way the child makes use of language and gradually broadens his skills to acquire greater comprehension and meaning for the words. The drama almost asks for more words, and so more words are required by the child. The drama allows for imitation and identification, and helps the child sort out the very difficult question of "who I am and what I do". Dramatic play gives information about "where I stand in relationship to other people, how I feel about what my parents are doing, what I think makes things happen".

Further, Piaget considers play as the child striving to find an equilibrium between himself and his world. It appears that play helps the equilibration process, and that examination and accommodation are involved in this effort. The child perceives new stimuli in his world, he may make use of new toys, look at them, touch them, even taste them. This is perhaps an accommodation process, to be followed by examination wherein his reactions to the toys and new experiences are assimilated, and this, in turn, helps to produce further mental development, or, as Piaget notes, further schema. However, even if the child does develop the mental schemata, this does not ensure that he will use them (Premack, 1977). Perhaps only play and the experiences of playful behaviour may ensure their use.

Within the traditional constructs of psychiatry, another view of the function of play is that provided by Winnicott, who has often indicated that playing has a "place and time" (Winnicott, 1967). He feels that play appears to help the child understand what is happening around him, inside him, and outside of himself. It helps him to begin to distinguish the "not me", and allows him to begin to recognize, sometimes with difficulty and with pain, what is certainly outside of his omnipotent and narcissistic control. "To control what is outside one has to do things, not simply to think or to wish, and doing things takes time, playing is doing" (Winnicott, 1967).

Winnicott talks about the "Potential Space between the baby and his mother" which is a position which varies according to the experiences of the baby in relationship to the mother. In this space, the baby is able to play, and, as Winnicott states, "It is play that is the universal, and which belongs to health: playing facilitates growth and therefore health: playing leads into group relationships: playing can be a form of communication in psychotherapy". Playing permits the baby to experiment with its relation to its mother by examining, testing out, relating to, finding out, observing what is under its control and what is not, and essentially using this potential space between mother and infant as a way of examining its own relationship to its environment. At this point, in the normal, healthy child, this is a child communicating with some part of himself - perhaps, as Winnicott has indicated, "the observing ego".

This observing ego allows the child to reflect upon and receive information from its environment, and to modulate the incoming information in a way which is acceptable and potentially integrating within the full ego. In this way, the ego and its perception of reality may become broadened, strengthened, and stabilized. This is important in order for the child to further its perceptions of reality, to have this original piece of playing relationship between itself and its mother in what Winnicott has talked of as the "potential space". Without this play in the potential space, we suspect that the child will not be able to make use of the concept of the observing ego. The child would then have to try and develop its ego prematurely by forced identification with the mother, which prevents, we think, the child from becoming a separate person. This premature ego development would be, in a sense, then, similar to a symbiotic relationship, which makes for the child's close identification and perhaps participation within the mother's problems and difficulties. Perhaps it is this that Manoni has recognized in noting the child's acceptance of the parent's problems as being the symptom expressed by the child.

Play, in the normal child, helps the observing ego, and it acts as a kind of self-healing mechanism. The child is able to play out and observe some of its own poorly organized, if not inadequate, responses to its environment - in particular to its mother. For the child, the play then becomes exceptionally exciting, and perhaps for the child playing always puts it - that is, the child - on the edge of a precipice wherein it examines unconscious aspects, at times not under conscious control. It is as if a kind of magic

relationship evolves which the child uses to explore its own unconsciousness. It is, however, the potential space, and the state of confidence which is present between the mother and the baby that permits the baby to play. The play, because of the precipice, may be frightening to the child, and perhaps it is in this realm that the teachers whose aim is to help the child play need to recognize that they must be present; not so much in an attempt to stop the child from being frightened, but to make themselves available for the child. The teacher, then, becomes another safe space, standing in for the mother in an earlier time, in every sense a responsible person who is prepared to recognize that children may be frightened by their play because it does evoke unconscious feelings, which, of course, will be frightening to the child until he is able to maintain control over them. As Winnicott says, "In playing, the child manipulates external phenomena in the service of the dream and invests external phenomena with dream meaning and feeling". Then if play seems to be purposeless, it may only be that we have not been able to understand the goal. In some instances, it is not precisely information or skills which are being learned, but rather the more unconscious goal of attaining greater emotional maturity.

The child at play may seem to be totally independent, particularly when he is in the narcissistic, omnipotent phase of his development, but he quickly runs into the frustrating wall of not being able to accomplish all that he sets out to do, and quickly moves back to the attached relationship. If this relationship permits him to explore his world, then the attachment changes to an individuation process, and the child becomes a separate person.

The child has learned control over behaviour and can satisfy his own needs, and he has learned some of the cultural mores and is able to move within these systems. With an increasing feeling of being able to do things effectively, then, we would expect increased exploration and risk-taking. But it is only when the child has a secure foundation of knowing that he can perform that he will take risks in situations where he might fail. And it is only when he realizes that failure is also part of learning that he is on the way to becoming an independent person, more ready to leave his parents.

Play does not end, though, with childhood. It continues on for the rest of one's life - golf, tennis, squash, skiing, chess, dancing, art, sailing, are all recognized as useful adult play. And although we talk of work when we are adults, we find that there are a large group of people who talk of their work in terms which can be seen as being playful. That is, when the adult's job offers the opportunity of being able to "play with" his or her work, to bring in novelty, to create an environment so as to produce ingenious solutions, or to vary the order of tasks, or the routine of the day, then it is perceived as more interesting and fulfilling. At the extreme is a scientist who discovers some great chemical in a serendipitous fashion by playing around in his mind with his work while on the golf course! It is unfortunate that our society has, for the past hundred years or more, created the kind of occupations which may truly be called only "work". These are the kinds of occupations where the individual simply stands at a machine and watches the machine as it routinely performs the same activity. What we may need to do is to offer these people who stand at machines the opportunity

of re-creating the machine's task so that its operator does not feel merely an extension of it and thus lose his feelings of humanity, but is once again able to bring playful attributes to his job.

At the other extreme, who but a species needing the mental diversions of play would turn games into jobs, and very lucrative jobs at that, like professional hockey, tennis, golf, racing, football, and so forth? It is a sad commentary on our society that in so doing we routinize and intensify these "games" so that the fun of playing them becomes "work", with a desperate intensity. And the money involved turns these workers into interchangeable commodities just as surely as does the assembly line!

So we play our whole lives long, in one way or another. What begins as a learning need, a part of the cognitive and psychological development of infant to child to adolescent, becomes not only a habit but an emotional need. I suspect that the enormous upsurge in organized recreation and leisure activities in this country directly parallels an increase in the very routine, boring nature of many adult jobs in a technological society. It also provides a release from the tensions of our highly competitive, very organized but often not physically active lives. Each time a child plays, he absorbs ideas, builds skills, furthers concepts, becomes more individual; and each time an adult plays he returns, somewhere in his mind, to those hazily remembered, slower, wonder-filled days of childhood, of only for the time it takes to bicycle through the park. And as surely as the child plays, albeit unknowingly, to learn enough to survive, so the adult continues to play, knowing it is a part of surviving he doesn't want to live without.

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